

Appl. No. 09/854,190
Amdt. dated December 24, 2003
Reply to Office action of August 26, 2003

In the Claims:

New claims 3-6 are added herein. The existing claims are not amended in this response.

1. (previously amended) A cylindrical straight slab type gas laser comprising:

a pair of cylindrical electrodes of different diameter disposed concentrically by way of spacers to fill the gap between the cylindrical electrodes with laser medium to define a straight slab;

a ring-shaped trick mirror disposed at one end of the straight slab;

an output mirror disposed at the center of the one end of the straight slab to pass part of the light and to reflect a part of the remaining light; and

a w-axicon mirror disposed at the other end of the straight slab, characterized in that the relationship between the center offset X_m and the center position X_0 of the trick mirror is set to $X_0 < X_m \leq 1.1 X_0$.

2. (previously amended) A cylindrical straight slab type gas laser of claim 1, wherein the output laser beam from the output mirror has a substantially Gaussian distribution when it is focused by the lens.

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3. (new) A cylindrical straight type gas laser of claim 1, wherein the center offset X_m is less than the center position X_0 .

4. (new) A method of constructing a cylindrical straight type gas laser comprising the steps of:

arranging pair of cylindrical electrodes of different diameter concentrically to one another by way of spacers;

arranging a w-axicon mirror at a first end of the cylindrical electrodes;

arranging an output mirror at a second end of and at the center of the cylindrical electrodes for passing a part of the light from the electrodes and for reflecting a part of the remaining light;

arranging a ring shaped trick mirror at the second end of and between the cylindrical electrodes;

filling the space between the cylindrical electrodes with a laser medium;

increasing the intensity of the light surrounding the spacers which passes between the concentric electrodes thereby providing a substantially Gaussian intensity distribution in a far-field image.

5. (new) A method of constructing a cylindrical straight type gas laser according to claim 4 wherein said step of increasing the intensity is accomplished by using a trick mirror

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having a relationship between the center offset X_m and the center position X_0 being $X_m \leq 1.1 X_0$.

6. (new) A method of constructing a cylindrical straight type gas laser according to claim 5 wherein the center offset X_m is less than the center position X_0 .